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NEWS

RSNA Press Release

Internet May Be Answer to Mammography Crisis

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At A Glance

- Digital mammography images can now be transferred over the Internet without loss of data or image quality.
- Women's access to mammography has been endangered due to a shortage of breast imaging specialists.
- Using broadband Internet, regional interpretation centers could be established to reduce screening backlogs and aid underserved areas.

CHICAGO - Digital mammography images can be accurately transmitted over broadband Internet, according to a study presented today at the annual meeting of the Radiological Society of North America (RSNA).

"We've proven that telemammography works," said the study's lead author, Alan R. Melton, M.D., assistant clinical professor of radiology at New York Presbyterian Hospital-Columbia University Medical Center in New York City. "The ability to transmit mammograms over long distances could significantly help to solve the crisis in access to screening mammography, as well as improve the accuracy of interpretation of the examinations."

According to a 2004 report from the Institute of Medicine, women's access to breast cancer screening is endangered due to a shortage of specialists in breast imaging and interpretation. Between 2000 and 2003, the number of mammography facilities operating in the United States dropped from 9,400 to 8,600 (an 8.5 percent decrease), causing women in some areas delays of up to five months for screening mammography services. One cause of the shortage has been the historically low level of reimbursement for mammography interpretation and the high level of medico-legal risk.

Dr. Melton's study, which included 1,314 diagnostic screening mammograms, determined that it is possible to transmit full-field digital mammography (FFDM) images to another location for interpretation without compromising accuracy, security or the use of computer-aided detection software.

In his study, Dr. Melton used two FFDM units and a computer-aided detection (CAD) system. The digital images were transmitted via Internet cable in a highly secure environment, including private networks and firewalls, to an interpreting workstation 110 miles away. Each image was transmitted in less than 45 seconds.

Through a series of tests, the researchers determined that digital mammograms sent to the

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remote workstation were identical to the original images. The analysis included comparison of image quality, file sizes, CAD markings and image interpretation by an independent reader.

"These results suggest that regional interpretation centers could be established to improve the accuracy and efficiency of screening mammography, reduce screening backlogs and aid underserved areas," Dr. Melton said. He envisions reconfiguring the way mammograms are interpreted by creating regional Centers of Excellence, where highly skilled radiologists would read digital mammograms transmitted from multiple centers.

"Finding more breast cancers earlier, which I believe we can do through digital mammography and Centers of Excellence, will significantly reduce the number of women dying from breast cancer," he said.

Co-authors are Peter D. Esser, Ph.D., Suzanne J. Smith, M.D., and Philip O. Alderson, M.D.

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Note: Copies of RSNA 2005 news releases and electronic images will be available online at RSNA.org/press05 beginning Monday, Nov. 28.

RSNA is an association of more than 38,000 radiologists, radiation oncologists, medical physicists and related scientists committed to promoting excellence in radiology through education and by fostering research, with the ultimate goal of improving patient care. The Society is based in Oak Brook, Ill.

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Abstract:	• Successful Long Distance Transmission and Validation of Digital Screening Mammograms Utilizing Broadband Internet

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